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OCT 2 4 2005
PATENT & TRADEMARK OFFICE

FIG. 1

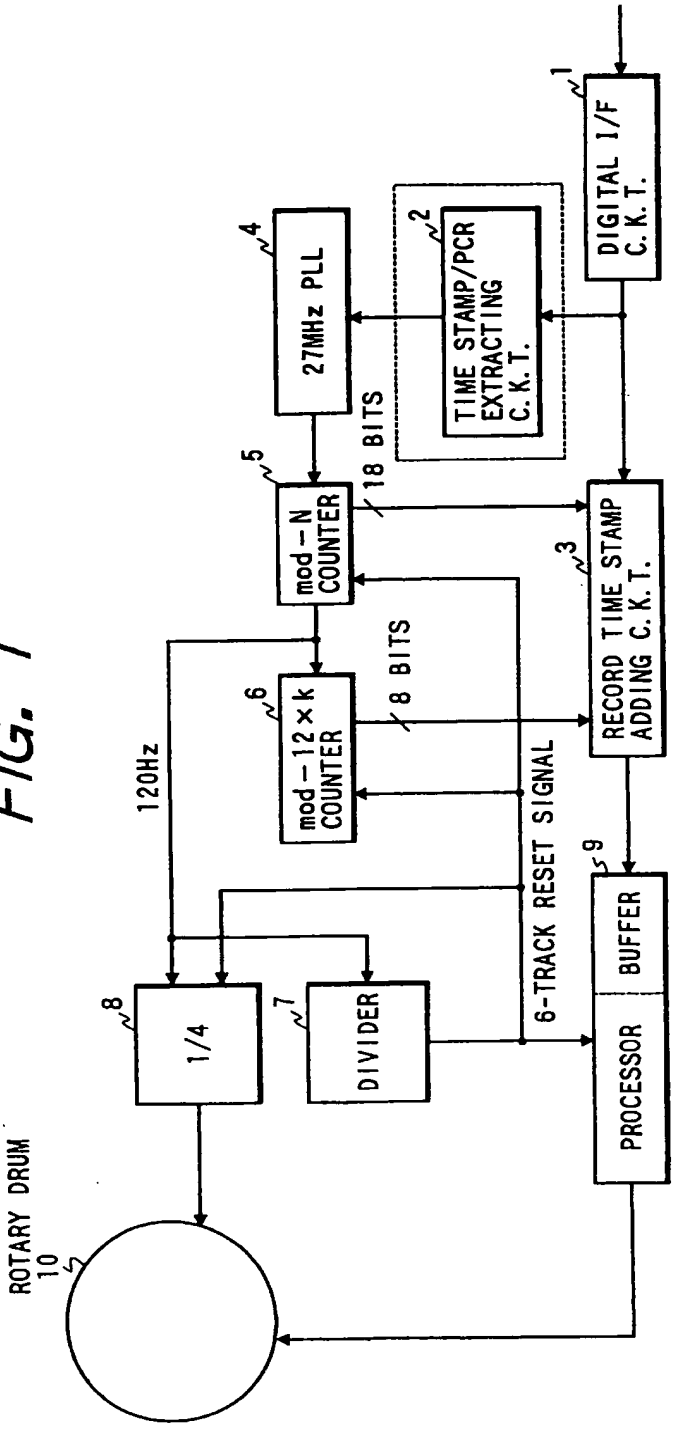


FIG. 2

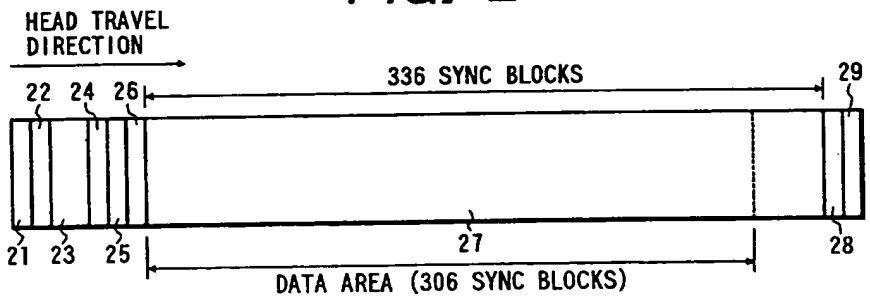

HEAD TRAVEL
DIRECTION
336 SYNC BLOCKS
22
24
26
29
21
23
25
27
28
DATA AREA (306 SYNC BLOCKS)

FIG. 3

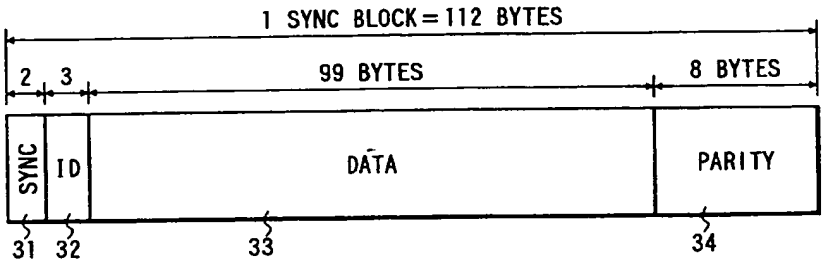

1 SYNC BLOCK = 112 BYTES
2
3
99 BYTES
8 BYTES
SYNC
ID
DATA
PARITY
31
32
33
34

FIG. 4

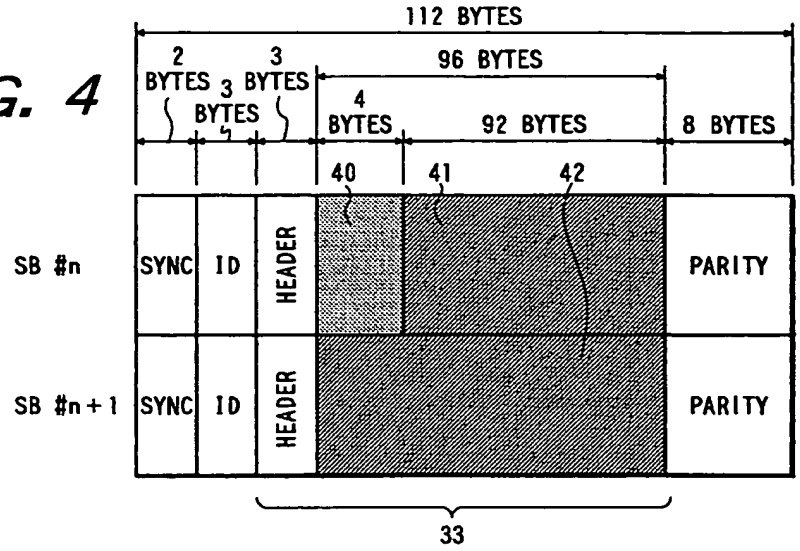

112 BYTES
2 BYTES
3 BYTES
3 BYTES
96 BYTES
4 BYTES
92 BYTES
8 BYTES
40
41
42
SB #n
SB #n+1
SYNC
ID
HEADER
PARITY
33

FIG. 5

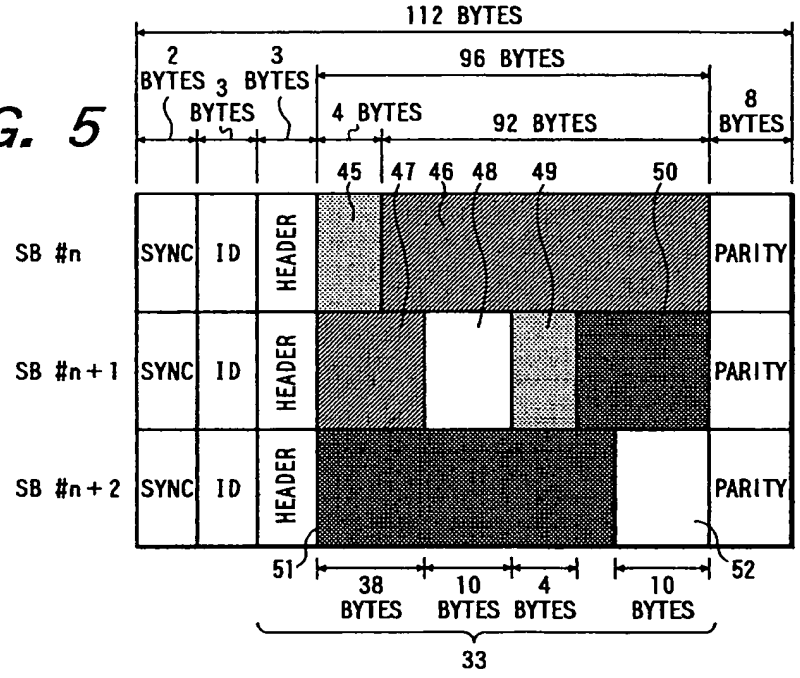

112 BYTES
2 BYTES
3 BYTES
3 BYTES
96 BYTES
4 BYTES
92 BYTES
8 BYTES
45
47
46
48
49
50
SB #n
SB #n+1
SB #n+2
SYNC
ID
HEADER
PARITY
51
52
38 BYTES
10 BYTES
4 BYTES
10 BYTES
33

FIG. 6(A)

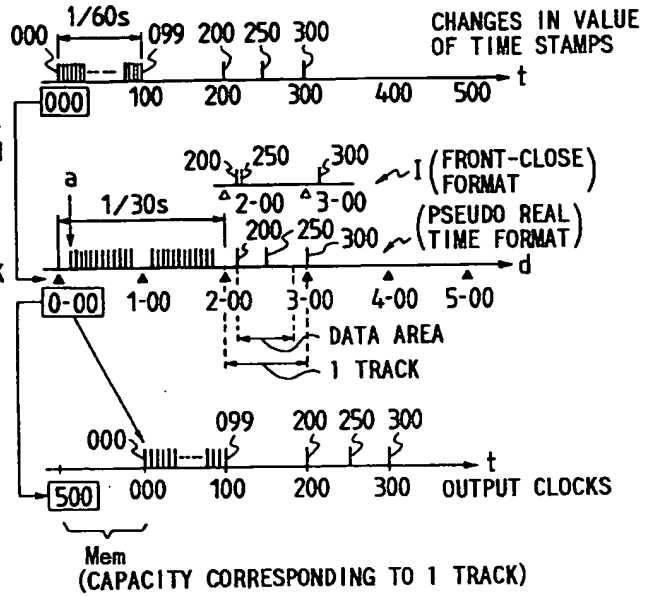


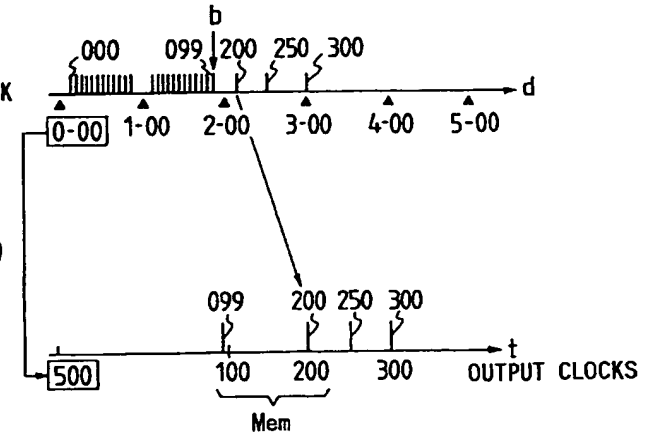
FIG. 6(B)

RECORDS ON TRACK

FIG. 6(C)

REPRODUCTION FROM TRACK POSITION a

FIG. 6(D)



RECORDS ON TRACK

FIG. 6(E)

REPRODUCTION FROM TRACK POSITION b

FIG. 7(A)

FIG. 7(B)

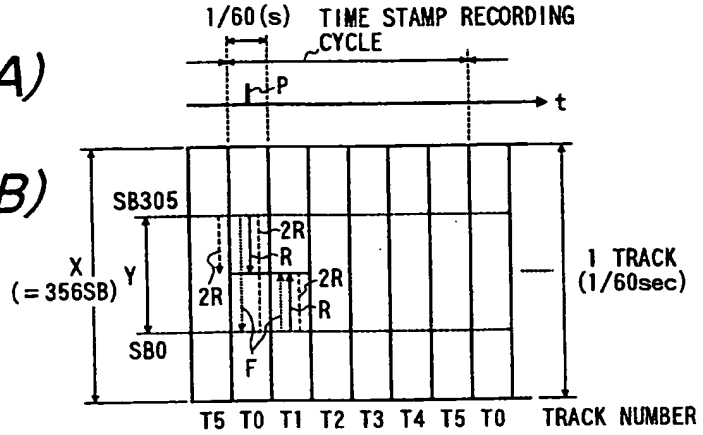


FIG. 7(C)

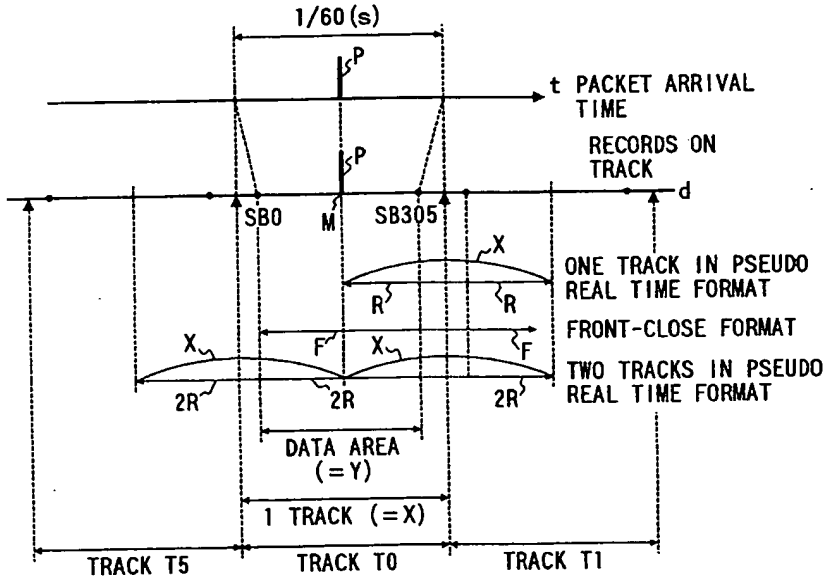


FIG. 8

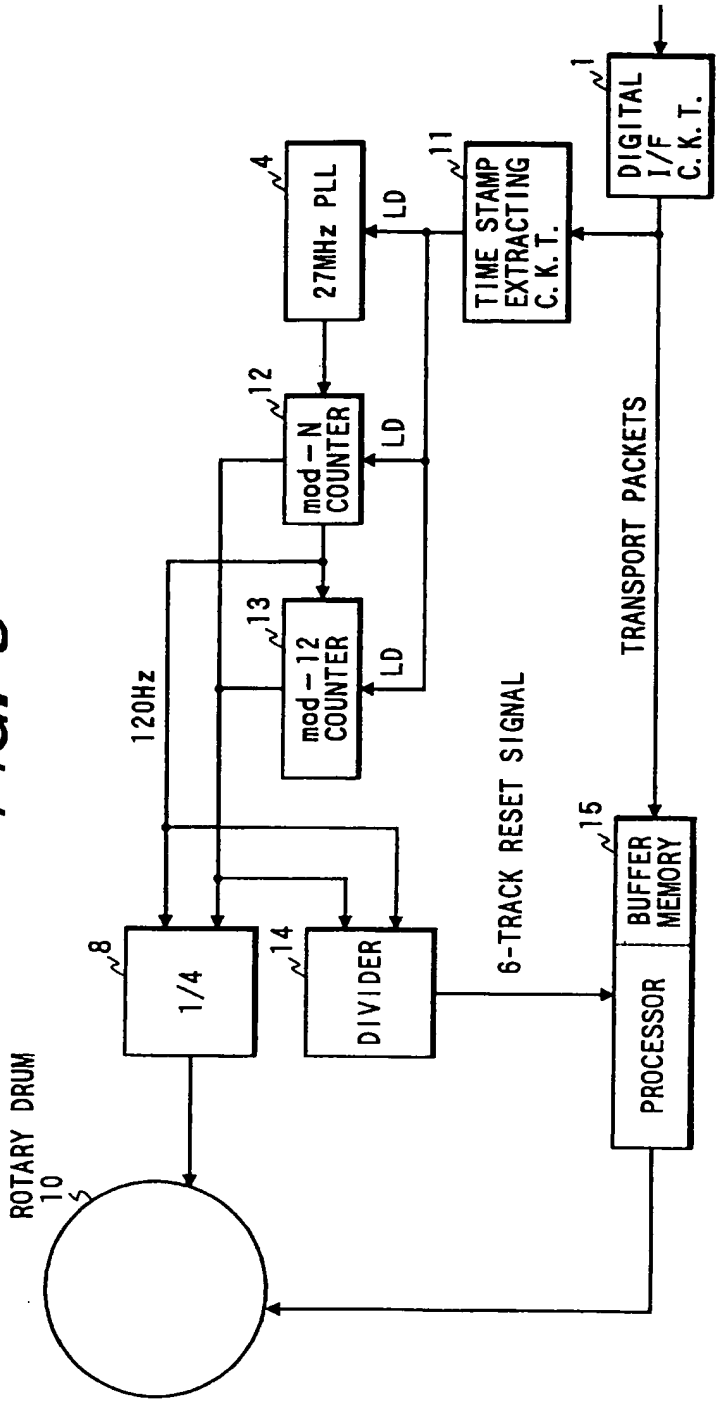

1
DIGITAL I/F C.K.T.
11
TIME STAMP EXTRACTING C.K.T.
4
27MHz PLL
LD
12
mod-N COUNTER
LD
13
mod-12 COUNTER
LD
120Hz
TRANSPORT PACKETS
6-TRACK RESET SIGNAL
15
BUFFER MEMORY
PROCESSOR
8
1/4
14
DIVIDER
ROTARY DRUM
10

FIG. 9

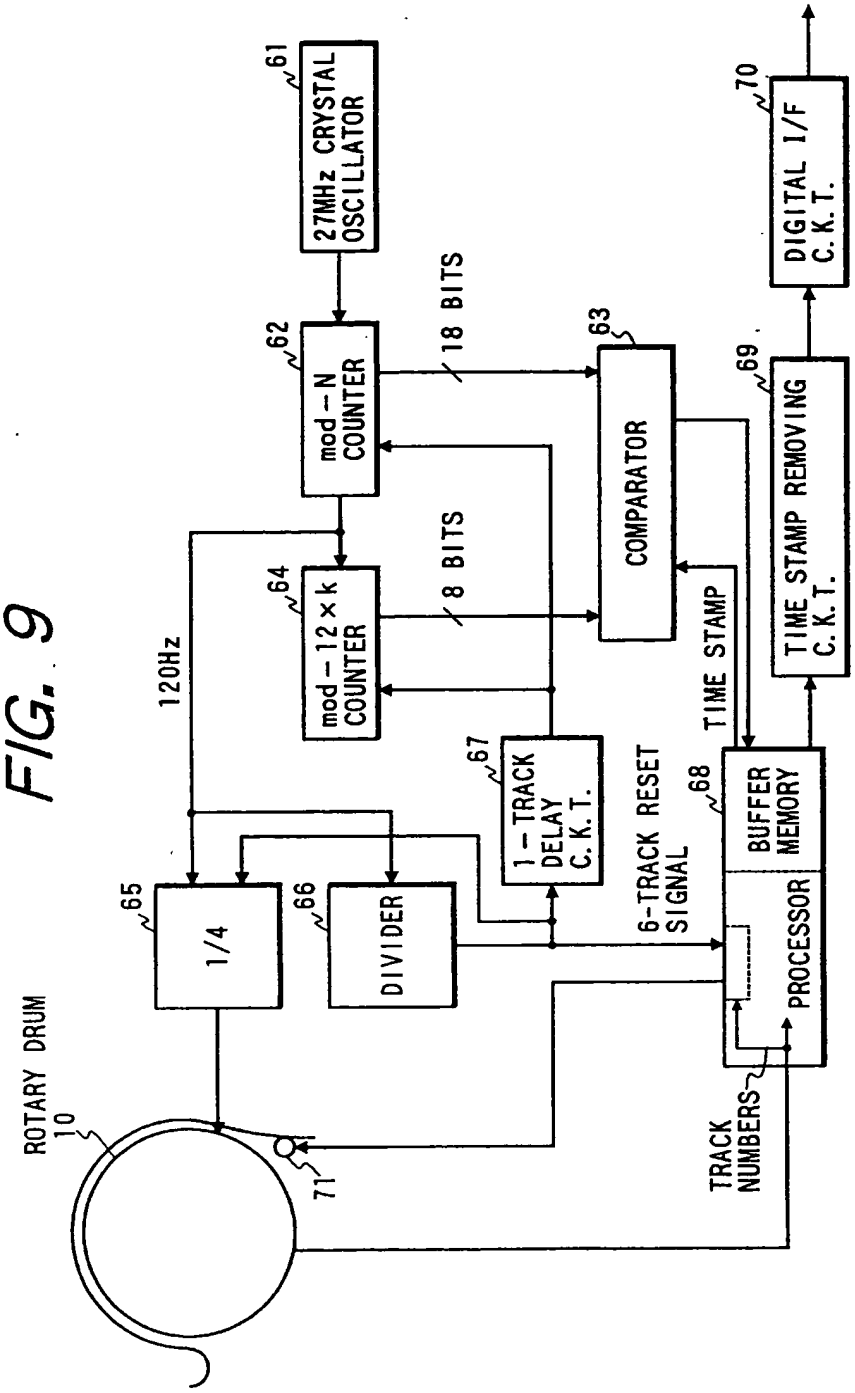

61
27MHz CRYSTAL OSCILLATOR
62
mod-N COUNTER
18 BITS
63
COMPARATOR
70
DIGITAL I/F C.K.T.
69
TIME STAMP REMOVING C.K.T.
64
mod-12×k COUNTER
8 BITS
120Hz
TIME STAMP
67
1-TRACK DELAY C.K.T.
68
BUFFER MEMORY
6-TRACK RESET SIGNAL
65
1/4
66
DIVIDER
PROCESSOR
ROTARY DRUM
10
71
TRACK NUMBERS

FIG. 10

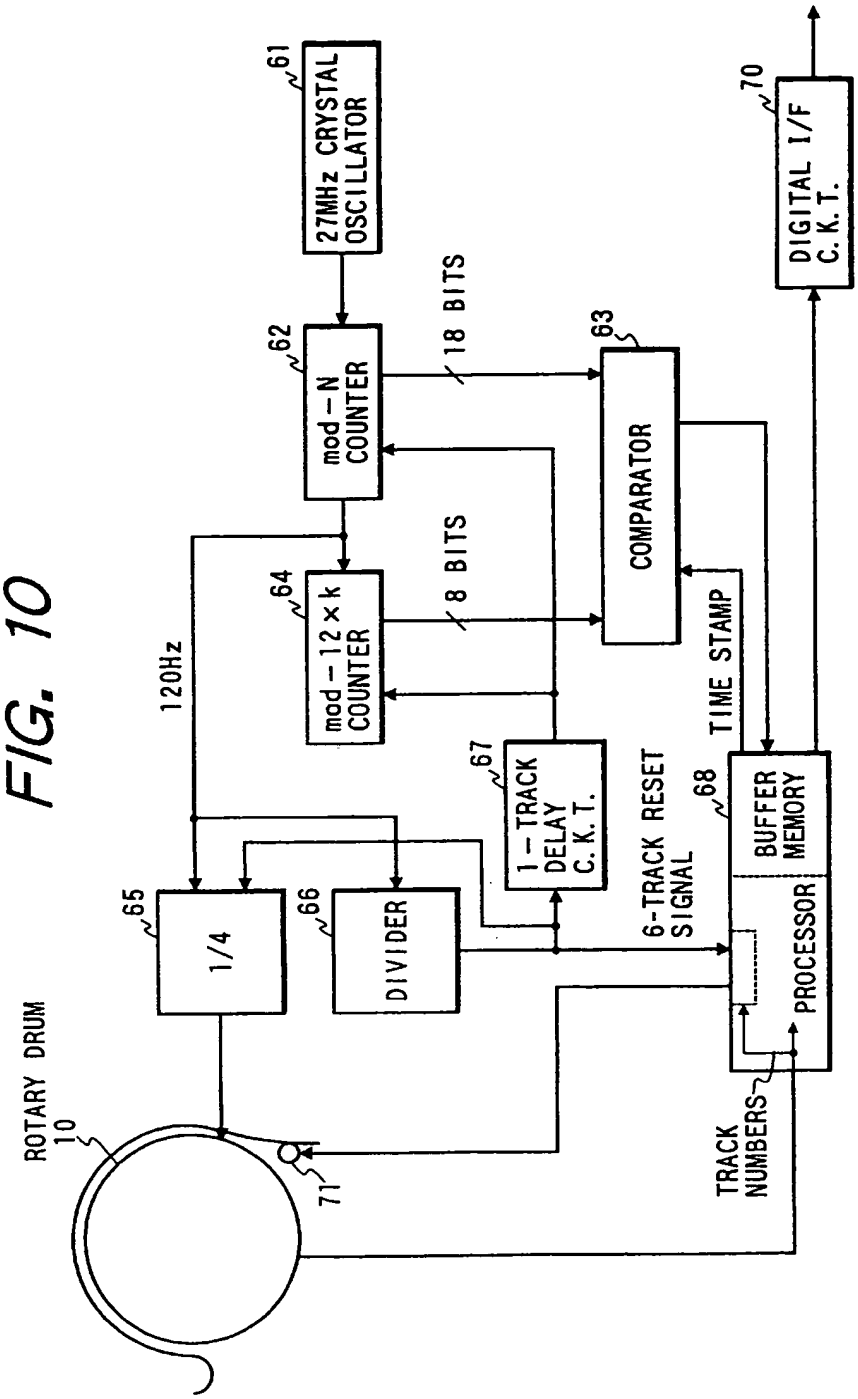

61
27MHz CRYSTAL OSCILLATOR
62
mod-N COUNTER
18 BITS
63
COMPARATOR
70
DIGITAL I/F C.K.T.
64
mod-12×k COUNTER
8 BITS
120Hz
TIME STAMP
67
1-TRACK DELAY C.K.T.
68
BUFFER MEMORY
6-TRACK RESET SIGNAL
65
1/4
66
DIVIDER
PROCESSOR
ROTARY DRUM
10
71
TRACK NUMBERS

FIG. 11(A)

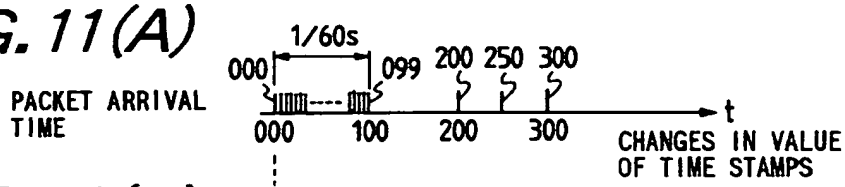


FIG. 11(B)

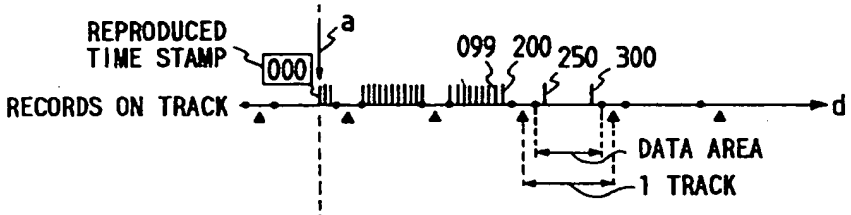


FIG. 11(C)

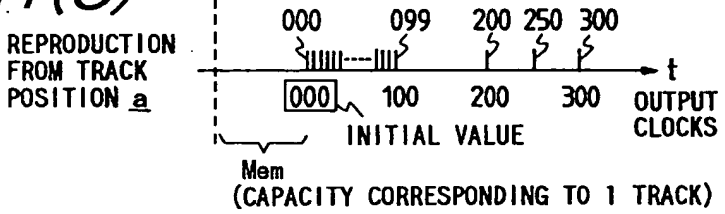


FIG. 11(D)

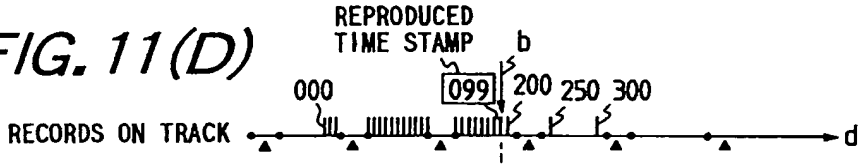


FIG. 11(E)

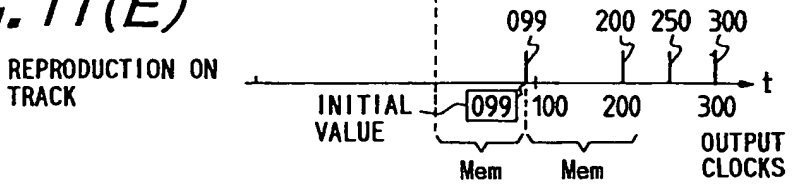


FIG. 12

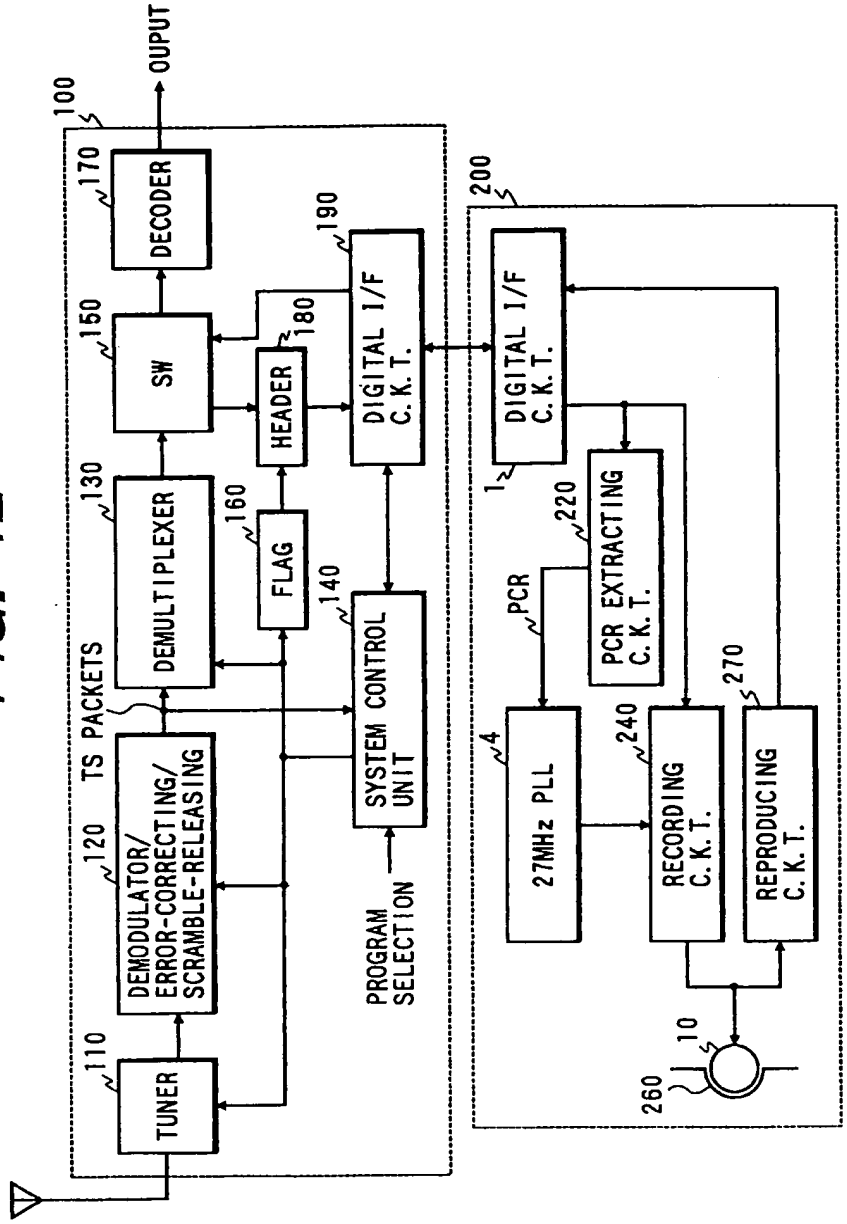

100
OUPUT
170
DECODER
150
SW
180
HEADER
190
DIGITAL I/F C.K.T.
130
DEMULTIPLEXER
160
FLAG
140
SYSTEM CONTROL UNIT
TS PACKETS
120
DEMODULATOR/ ERROR-CORRECTING/ SCRAMBLE-RELEASING
110
TUNER
PROGRAM SELECTION
200
DIGITAL I/F C.K.T.
1
220
PCR EXTRACTING C.K.T.
PCR
4
27MHz PLL
240
RECORDING C.K.T.
270
REPRODUCING C.K.T.
10
260

FIG. 13(A)

PROGRAM 1	PID05
PROGRAM 2	PID07
PROGRAM 3	PID09

FIG. 13(B)

PID=05
PMT OF
PROGRAM 1

AUDIO 1	PID10
AUDIO 2	PID11
VIDEO	PID12
PCR	PID15

FIG. 13(C)

PID=07
PMT OF
PROGRAM 2

AUDIO 1	PID20
AUDIO 2	PID21
VIDEO	PID22
PCR	PID25

FIG. 13(D)

PID=09
PMT OF
PROGRAM 3

AUDIO 1	PID30
AUDIO 2	PID31
VIDEO	PID22
PCR	PID15

FIG. 14

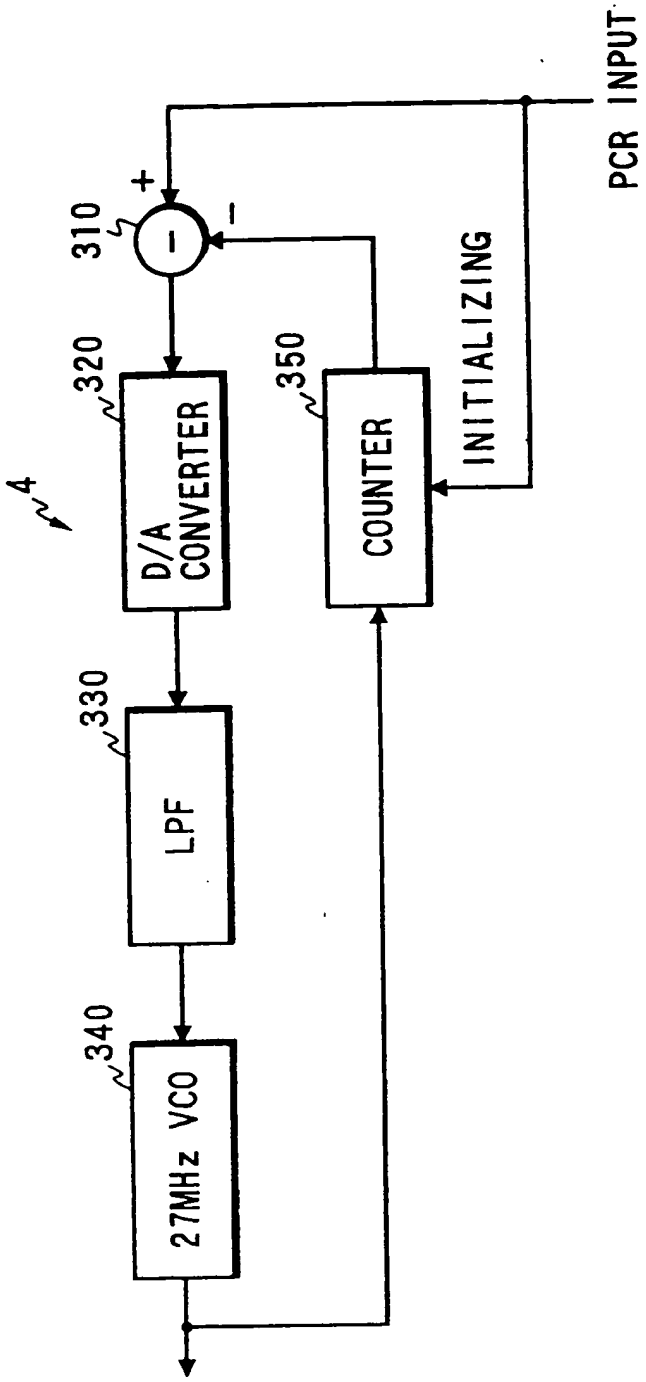

PCR INPUT
310
+
−
320
D/A CONVERTER
350
COUNTER
INITIALIZING
4
330
LPF
340
27MHz VCO

FIG. 15

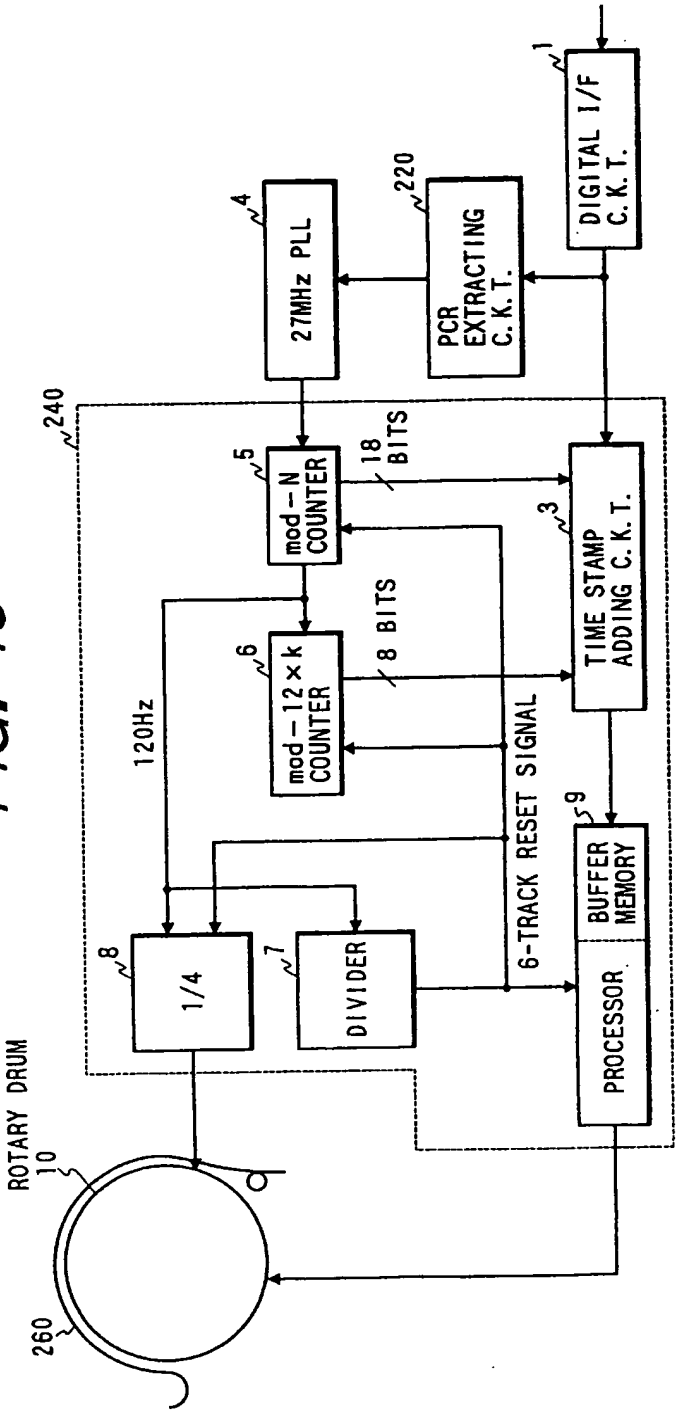

1
DIGITAL I/F C.K.T.
220
PCR EXTRACTING C.K.T.
4
27MHz PLL
240
5
mod-N COUNTER
18 BITS
3
TIME STAMP ADDING C.K.T.
6
mod-12×k COUNTER
8 BITS
120Hz
6-TRACK RESET SIGNAL
9
BUFFER MEMORY
PROCESSOR
8
1/4
7
DIVIDER
ROTARY DRUM
10
260

FIG. 16

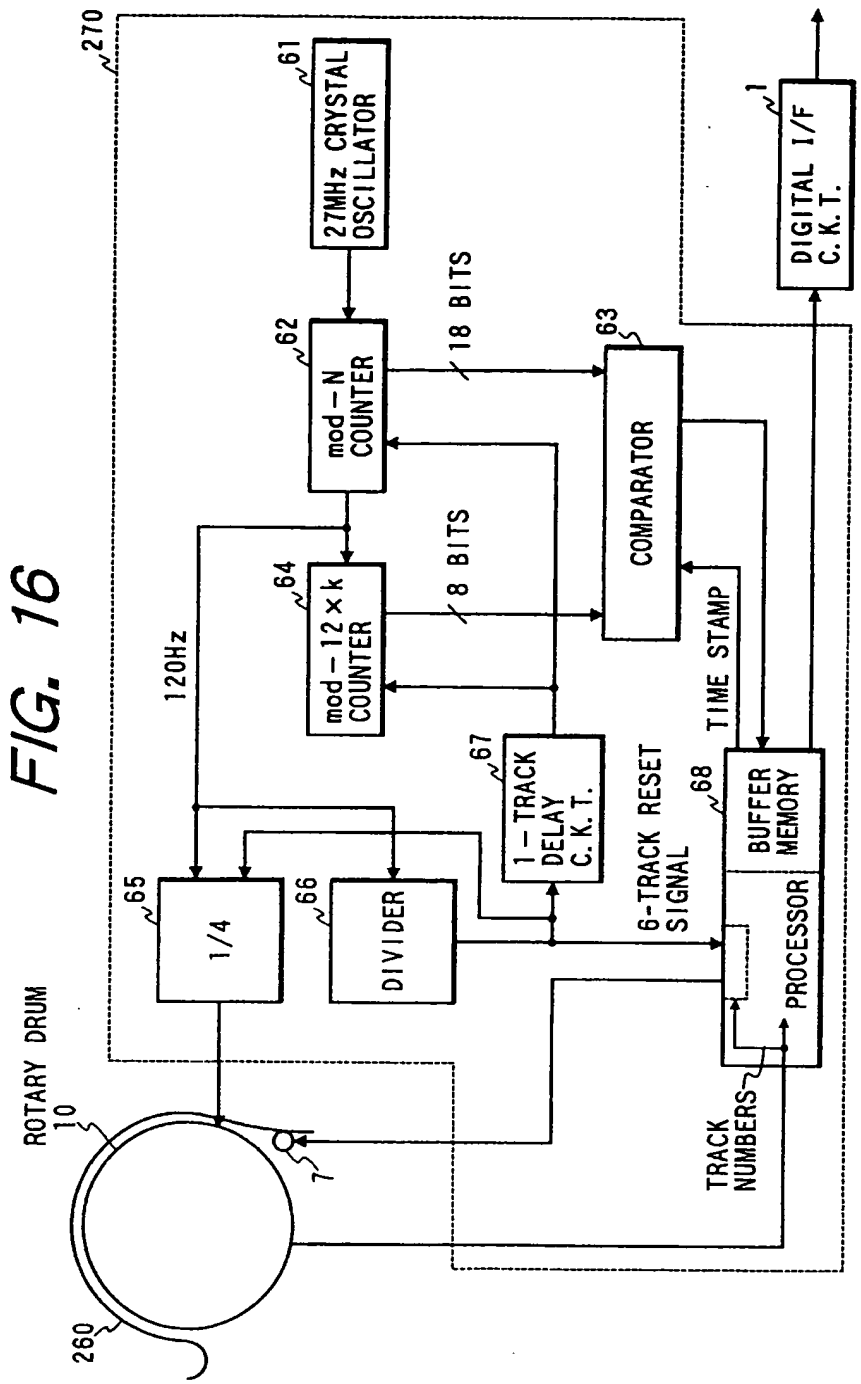

270
61
27MHz CRYSTAL OSCILLATOR
62
mod-N COUNTER
18 BITS
63
COMPARATOR
1
DIGITAL I/F C.K.T.
64
mod-12×k COUNTER
8 BITS
120Hz
TIME STAMP
67
1-TRACK DELAY C.K.T.
68
BUFFER MEMORY
6-TRACK RESET SIGNAL
65
1/4
66
DIVIDER
PROCESSOR
ROTARY DRUM
10
7
TRACK NUMBERS
260

FIG. 17(A)

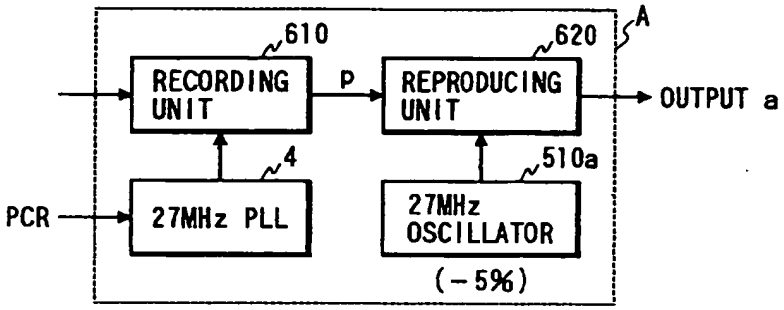


FIG. 17(B)

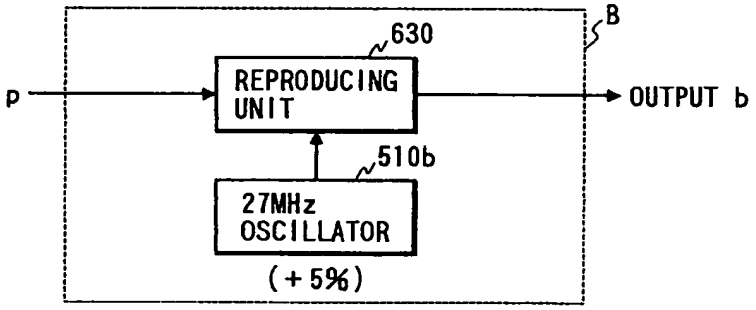
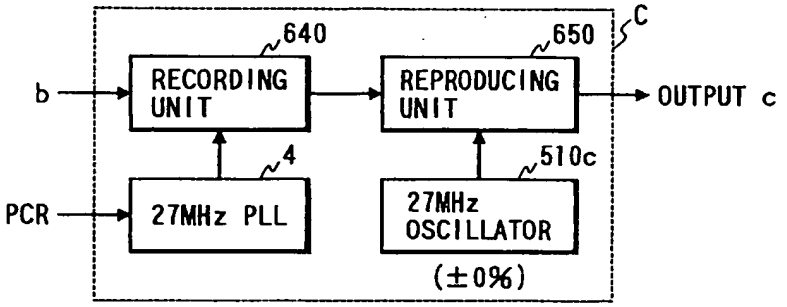


FIG. 17(C)



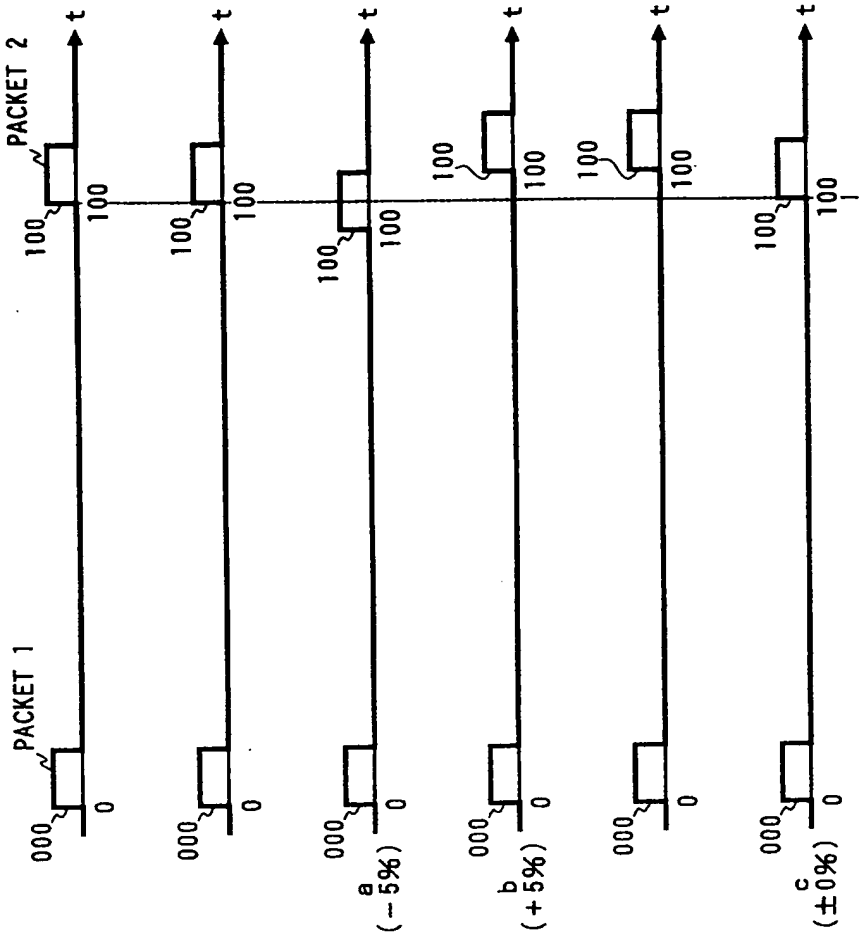


FIG. 18(A)

FIG. 18(B)

FIG. 18(C)

FIG. 18(D)

FIG. 18(E)

FIG. 18(F)

FIG. 19

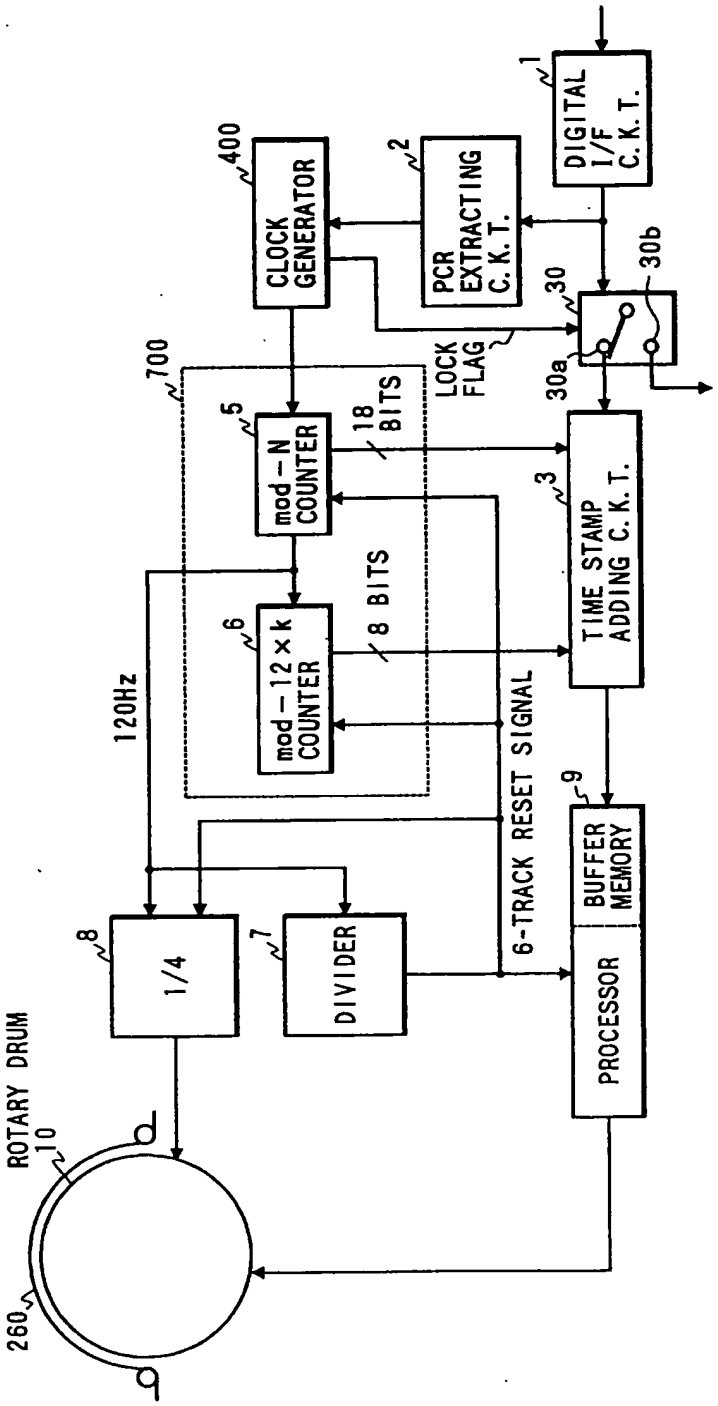

1
DIGITAL I/F C.K.T.
400
CLOCK GENERATOR
2
PCR EXTRACTING C.K.T.
30
30b
30a
LOCK FLAG
700
5
mod-N COUNTER
18 BITS
3
TIME STAMP ADDING C.K.T.
6
mod-12×k COUNTER
8 BITS
120Hz
6-TRACK RESET SIGNAL
9
BUFFER MEMORY
PROCESSOR
8
1/4
7
DIVIDER
ROTARY DRUM
10
260

FIG. 20

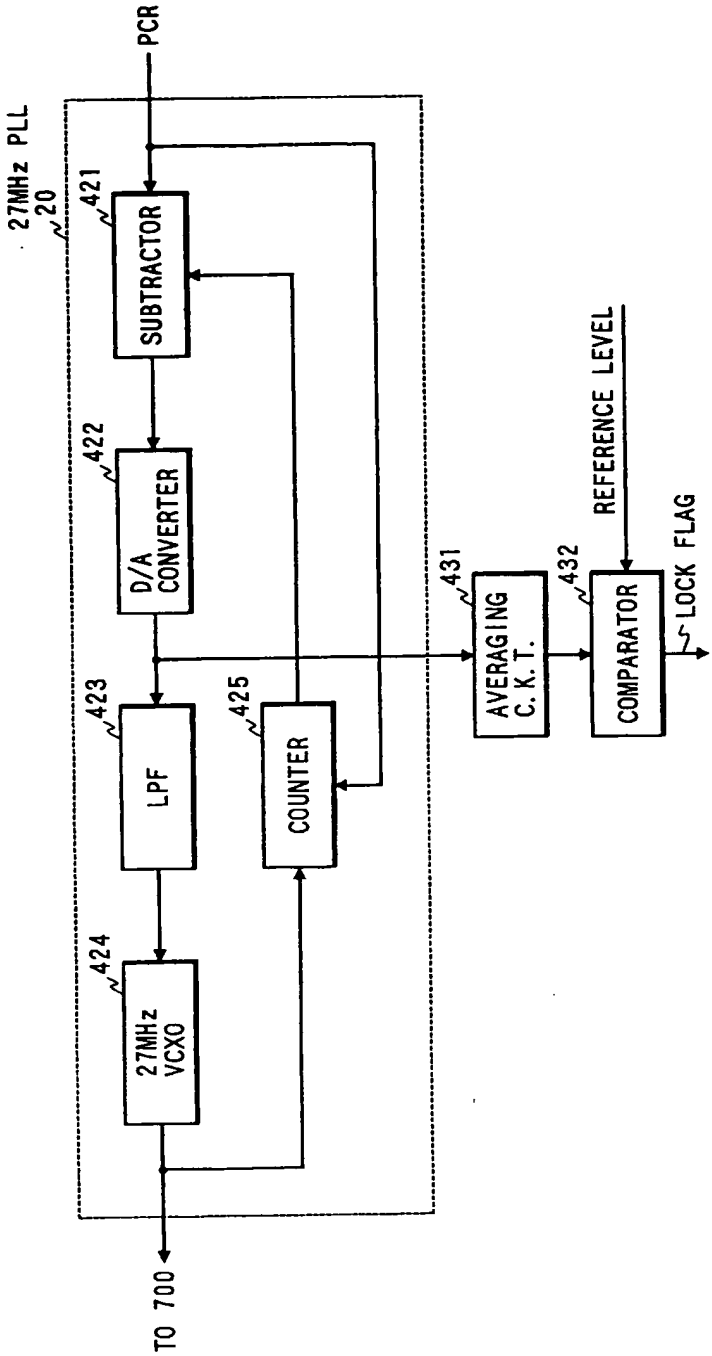

PCR
27MHz PLL
20
421
SUBTRACTOR
422
D/A CONVERTER
423
LPF
424
27MHz VCXO
425
COUNTER
431
AVERAGING C.K.T.
432
COMPARATOR
REFERENCE LEVEL
LOCK FLAG
TO 700

FIG. 21

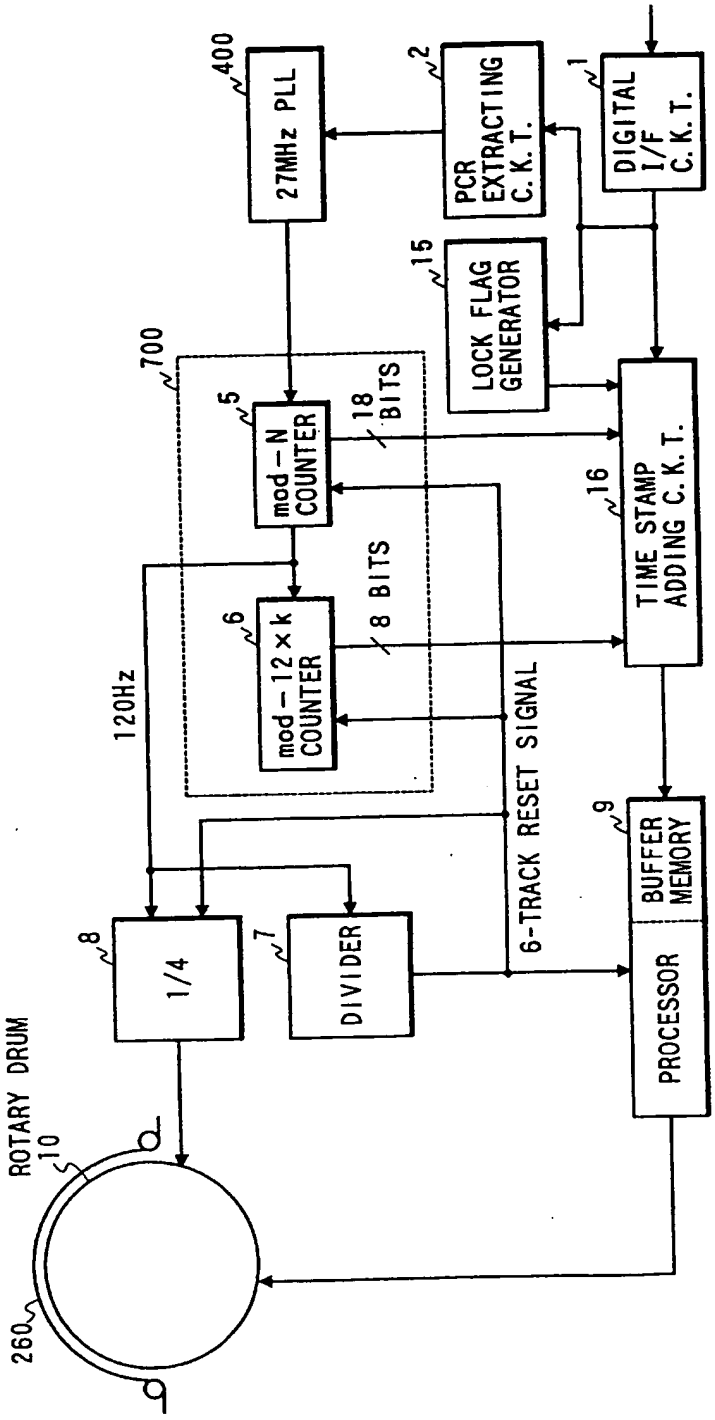
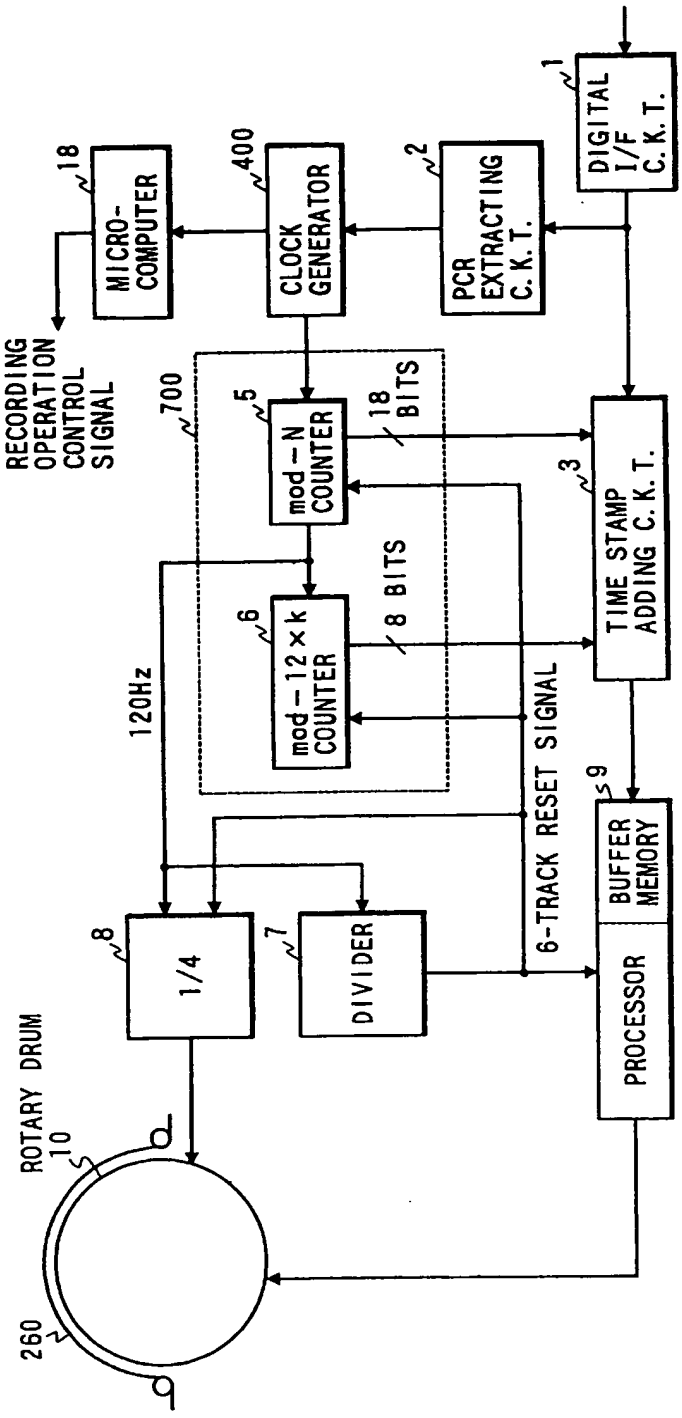

400
27MHz PLL
2
PCR EXTRACTING C.K.T.
1
DIGITAL I/F C.K.T.
15
LOCK FLAG GENERATOR
700
5
mod-N COUNTER
18 BITS
16
TIME STAMP ADDING C.K.T.
6
mod-12×k COUNTER
8 BITS
120Hz
6-TRACK RESET SIGNAL
9
BUFFER MEMORY
PROCESSOR
8
1/4
7
DIVIDER
ROTARY DRUM
10
260

FIG. 22


DIGITAL I/F C.K.T.
1
PCR EXTRACTING C.K.T.
2
CLOCK GENERATOR
400
MICRO-COMPUTER
18
RECORDING OPERATION CONTROL SIGNAL
700
mod-N COUNTER
5
18 BITS
TIME STAMP ADDING C.K.T.
3
8 BITS
mod-12×k COUNTER
6
120Hz
6-TRACK RESET SIGNAL
BUFFER MEMORY
9
PROCESSOR
1/4
8
DIVIDER
7
ROTARY DRUM
10
260